

### **REMARKS**

In the Final Office Action mailed on September 17, 2008, all of pending claims 1-7, 9-23, and 25-27 were rejected under 35 U.S.C. 103. The rejections were further asserted in the Advisory Action mailed on December 30, 2008.

In order to expedite prosecution, independent claims 1, 9 and 20 have been amended.<sup>1</sup> Independent claims 1 and 20 have been amended to recite that the blend of two or more polyester resins includes between 60 and 90 weight percent polyester resin having a Tg less than about 25 °C. For consistency, dependent claim 9 has also been amended to recite that the blend includes between about 70 and 90 weight percent polyester resin having a Tg of less than about 25 °C. Support for the amendments to claims 1, 9, and 20 can be found, for example, in claim 7 as originally filed. Claim 7 is accordingly cancelled.

Claim 26 has been amended to correct a typographical error.

New claim 28 has also been added.<sup>2</sup>

### **The Present Invention**

The present invention provides a coating composition suitable for food-contact coatings of food or beverage cans. In preferred embodiments, the coating composition of the invention is particularly suited for use as a coating on a beverage can end. Beverage can ends are typically formed by coating a flat metal substrate on at least one surface with a coating composition, which is then cured to form a crosslinked coating. The cured substrate is then deformed, typically via stamping, into a riveted beverage can end that includes a rivet for attaching a pulltab thereto for purposes of opening a scored spout portion of the beverage can end. The contour of the rivet on a beverage can end is much more extreme than any contour typically present on a can end. To be suitable for use with such a riveted beverage can end, a coating should exhibit suitable flexibility and adhesion to accommodate the severity of rivet fabrication, while also preferably exhibiting suitable corrosion resistance and feathering properties. Conventional can coatings typically do not possess the balance of properties required for this demanding end use.

In a preferred embodiment, the coating composition of the invention includes a special blend of polyesters that includes between about 60 and 90 weight percent of polyester resin

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<sup>1</sup> Applicants reserve the right to pursue previous claims 1, 9 and 20 (and any claims depending therefrom) in a continuing application without prejudice.

<sup>2</sup> Support for new claim 28 can be found, for example, in the application as filed at page 8, lines 1 and 16-19.

having a Tg less than about 25°C and between about 10 and 40 weight percent of polyester resin having a Tg greater than 50°C. None of the cited references discussed below disclose a coating composition including this blend.

### **I. 35 U.S.C. 103 Rejections**

Claims 1-6, 9-23 and 25-27 stand rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/47974 (“Heyenk”) in view of an article from the Journal of Polymer Science (“Fakirov”). Claims 16 and 17 stand rejected under Heyenk in view of U.S. 6,235,102 (“Parekh”).

#### **a. Claims 1-21 and 25-27**

Amended independent claims 1 and 20 recite a can (claim 1), or a method of making a can (claim 20), in which at least one body or end portion is coated with a coating composition that includes a blend of polyesters including between 60 and 90 weight percent of polyester resin having a Tg less than about 25 °C and between 10 and 40 weight percent of polyester resin having a Tg greater than 50 °C.

In contrast, the primary Heyenk reference discloses a coating composition that incorporates a polymer blend preferably having a majority of a “high” Tg polymer (Tg 45-50 °C).<sup>3</sup> Heyenk does not disclose any coating compositions incorporating a polyester blend that includes either:

- (i) between 60 and 90 weight percent of polyester resin having a Tg less than about 25 °C, or
- (ii) any amount of a polyester resin having a Tg greater than 50 °C.

Nonetheless, the Advisory Action looks to the Fakirov reference to address the deficiencies of Heyenk, arguing that “the teachings of Fakirov clearly show that it would have been obvious to optimize the teaching of Heyenk to achieve a composition with increased durability.” Applicants respectfully traverse this assertion, as it is based on impermissible hindsight bias and technical speculation. The secondary Fakirov reference is a journal article that examines the relationship between the Tg and hardness of certain thermoplastic elastomers. This reference is silent with respect to thermoset polyester coatings and its technical applicability is

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<sup>3</sup> Notably, the blends of the Heyenk worked examples include a substantial majority (i.e., 63-85 wt-%) of “high” Tg polyester and a substantial minority (i.e., 15-37 wt-%) of “low” Tg polyester. See the Table included in Applicants’ previous communication (i.e., “Response B”) for additional information.

speculative. No reasoning has been provided why a skilled artisan considering Heyenk would have looked to improve the durability of the Heyenk coating in the first place (Heyenk does not disclose any problems associated with durability), let alone why such a skilled artisan would have looked to the Fakirov thermoplastic reference had they actually perceived a durability problem with their thermoset polyester coating.

Even *arguendo* if a skilled artisan were motivated to look to Fakirov in regards to coating durability, it is pure speculation whether an increase in Tg would in fact improve coating durability. It is well known that increases in Tg may be detrimental to numerous coating properties (such as, for example, flexibility), which could potentially degrade the durability of the Heyenk coating.

Moreover, the coating resulting from the proposed combination of Heyenk in view of Fakirov would still not include from between 60 and 90 weight percent of polyester resin having a Tg less than about 25 °C as recited in the instant claims. Again, Heyenk teaches the desirability of including a majority of “high” Tg polymers (and a corresponding minority of “low” Tg polymers) and does not disclose any coatings with a polyester blend that includes between 60 and 90 weight percent of polyester resin having a Tg less than about 25 °C.

For the foregoing reasons, it is respectfully submitted that independent claims 1 and 20 are allowable over the cited references. To conclude otherwise is to exercise impermissible hindsight bias. The recent Supreme Court case *KSR International Co. v. Teleflex Inc.* cautions against such bias, instructing that “[a] factfinder should be aware . . . of the distortion caused by hindsight bias and must be cautious against arguments reliant upon *ex post* reasoning.”<sup>4</sup>

**b. Claims 16 and 17**

It would appear that the Final Office Action cited Parekh only with respect to dependent claims 16 and 17, which recite the presence of an acrylate copolymer in the coating composition. Clarification is respectfully requested should Applicants’ assumptions be incorrect. The Office Action mailed on February 19, 2008 acknowledged that Heyenk “is silent regarding the addition of an acrylate copolymer having glycidyl groups” and looked to Parekh to overcome this deficiency. Even *arguendo* if the proposed combination were made, the resulting coating composition would not include all the features of independent claim 1 from which claims 16 and

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<sup>4</sup> 550 U.S. \_\_\_\_\_ (2007), slip opinion page 17.

17 depend. For example, neither reference discloses a composition including a blend of two or more polyesters having a polyester with a Tg greater than 50°C. It is accordingly submitted that claims 16 and 17 are allowable over the combination of Heyenk and Parekh.

**c. Claims 22-23 and 25**

Independent claim 22 recites a coating composition that is capable of passing the beverage end fabrication test recited therein. As acknowledged by the Final Office Action, none of the pending claims are anticipated by Heyenk.<sup>5</sup> Item 13 of the Final Office Action, however, asserts that “[s]ince the optimized composition recited by Heyenk is the same as that recited by applicant it is the examiner’s opinion that it would inherently pass the same amount of current as recited by applicant in claim 22.” As discussed above in conjunction with claims 1 and 20, a skilled artisan considering the Heyenk reference would not have been motivated to modify the Heyenk composition as proposed and it would be pure speculation whether the “optimized” Heyenk coating composition would be capable of passing the test recited in independent claim 22. It is accordingly submitted that claims 22-23 and 25 are in condition for allowance.

**II. New Claim 28**

Because independent claim 1 is in condition for allowance, new claim 28, which depends from claim 1, is likewise in condition for allowance. Moreover, Heyenk does not disclose a coating composition that includes a phenoplast crosslinker.

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<sup>5</sup> See Item 7 of the Office Action at page 9.

**Conclusion**

In view of the foregoing, Applicants respectfully submit that all of pending claims 1-6, 9-23, and 25-28 are in condition for allowance. A notice to that effect is respectfully requested. The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account No. 50-2070.

Respectfully submitted,

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Electronically filed on:  
January 13, 2009

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